

ATTACHMENT 2-8 IG CLOSURE AND POST-CLOSURE

1.0 INTRODUCTION

1.1 This attachment provides the closure and post-closure plans for Dugway Proving Ground's (DPG's) Igloo G required by R315-8-7.

1.2 Attachment 2-8 is organized in the following sections:

- Closure Plan for Igloo G
- Financial Requirements
- References

2.0 CLOSURE PLAN FOR IGLOO G: 40 CFR 270.14(B)(13), 264.110 through 264.120; R315-3-2.5(b)(13), 8-9.9

2.0.1 This section describes the procedures that will be used to perform closure of Igloo G at DPG. Igloo G is used for container storage of range recovered munitions, which are known or suspected to contain chemical warfare materiel and the hazardous waste codes listed in permit condition III.B. The location of Igloo G is shown in Attachment 2-5 of this permit. This section addresses closure procedures for Igloo G. Post-closure care of Igloo G is not required because all hazardous waste and hazardous waste constituents will be removed or decontaminated during closure operations.

2.0.2 Prior to implementation, this plan will be updated for consistency with new rules, requirements, and to include sample methods and procedures. Updates to the plan require a permit modification and public comment period and must be approved by the Executive Secretary prior to plan implementation.

2.0.3 Closure of Igloo G is discussed in the following sections:

- Content of the Closure Plan
- Closure Performance Standard
- Schedule for Closure
- Disposal or Decontaminations of Equipment, Structures, and Soils
- Certification of Closure

2.1 Content of the Closure Plan: R315-8-7.

2.1.1 When the U.S. Army determines that final closure of Igloo G should commence; a detailed up-to-date closure plan will be completed and submitted to the Executive Secretary. A permit modification, submitted in accordance with R315-3-4.3, shall be approved prior to beginning closure activities.

2.1.2 The final closure plan will include:

- A description of how Igloo G will be closed in accordance with the closure performance standard required by R315-8-7
- A description of how final closure of Igloo G will be conducted
- An estimate of the maximum inventory of hazardous waste that was ever on-site
- A description of the methods to be used to remove, transport, treat, store, or dispose of all hazardous wastes generated during closure
- A description of the steps needed to remove or decontaminate all hazardous waste residues and contaminated equipment, system components, structures, and soils
- A description of all other activities necessary to meet the closure performance standard
- A schedule for closure

2.2 Closure Performance Standard: 40 CFR 264.111; R315-8-7

- 2.2.1 Closure performance standards will be addressed in the plan to be submitted prior to final closure. Parameters for which closure standards will be considered include chemical agents listed in Attachment 2-1, metals, explosive constituents, and other constituents that may have been release to the environment. In addition, background data and established risk thresholds, such as those presented in Table 8-1, will be considered when establishing closure performance standards for Igloo G.

Table 8-1 Dugway Soil Metals Background and Risk Levels			
Metal	Range of DPG Background Levels (mg/kg) Table 5.2¹	DPG Background Levels (mg/kg) Table 6.1 Non- parametric levels 95% UTL^{1,2}	EPA Region 9 PRG for Residential levels (mg/kg)³
Aluminum	2300 – 26,800	19,000	76,000
Antimony	6.1 – 10	NC	31
Arsenic	1.3 – 21	13	0.39
Barium	19 – 197	470	5400
Beryllium	0.21 – 1.6	1.1	150
Cadmium	0.3 – 0.8	NC	37
Calcium	15,000 - 250,000	200,000	
Chromium (Total)	3.0 – 20	17	210
Cobalt	2.0 – 27	7.5	4700
Copper	1.9 – 69	2	2900
Iron	3400 – 28,000	20,000	23,000
Lead	2.1 – 45	22	400
Magnesium	2000 – 37,000	31,000	
Manganese	62 – 2000	470	1800
Mercury	0.06 – 0.2	NC	23
Nickel	3.0 – 67	15	1600
Potassium	640 – 10,000	7900	
Selenium	0.4 – 2.0	NC	390
Silver	ND	NC	
Sodium	270 – 14,700	12,000	390
Thallium	NC	NC	5.2
Vanadium	9.0 – 32	30	550
Zinc	9.3 - 174	67	23,000
<ol style="list-style-type: none"> 1. From report “Final Characterization and Recommended Use of Facility-Wide Background Soil Metals Data (June 2001)” 2. Facility-wide background soil metals data report provides guidance in the event that metals found at the site are greater than the 95% Upper Tolerance Limit (UTL) or maximum concentration if no UTL is calculated. A suggested course of action includes but not limited to: additional sampling, review of site history, and evaluation of magnitude, frequency and spatial distribution of suspected release. 3. EPA Region 9 indicates that chemical concentrations above these levels would not automatically designate a site as “dirty” or triggers a response action. However, exceeding a Preliminary Remediation Goal (PRG) suggests that further evaluation of the potential risks that may be posed by site contaminants is appropriate. Further evaluation may include additional sampling, consideration of ambient levels in the environment, or a reassessment of the assumptions contained in these screening-level estimates. 			

2.3 Schedule for Closure: 40 CFR 264.112(b)(6); R315-8-7

- 2.3.1 No specific date for Igloo G closure has been scheduled. When it is determined that closure of Igloo G can begin, a detailed closure plan will be submitted to the Executive Secretary and will include a schedule for closure. Closure activities will not begin until after the final closure plan is approved. It is anticipated that closure can be completed within one hundred eighty (180) days of receiving approval of the final closure plan from the Executive Secretary.

2.4 Disposal or Decontamination of Equipment, Structures, and Soils: 40 CFR 264.114; R315-8-7

- 2.4.1 All contaminated equipment, structures, and soils will be properly decontaminated and disposed of in compliance with standards for generators of hazardous waste. After decontamination and final removal of concrete and equipment from Igloo G, the air in Igloo G will be monitored for the presence of chemical agents.

2.5 Post-Closure Plan:

- 2.5.1 A post-closure plan will not be required because hazardous waste will not remain at Igloo G after closure. The property will remain in the custody of the Army.

2.6 Certification of Closure: 40 CFR 264.115; R315-8-7

- 2.6.1 Within sixty (60) days of completion of closure, DPG will submit to the Executive Secretary, by registered mail, certification that Igloo G has been closed in accordance with the approved closure plan. The Installation Commanding Officer and an independent registered professional engineer will sign the certification. Documentation supporting the engineer's certification will be furnished upon request.

2.7 Survey Plat: 40 CFR 264.116; R315-8-7

- 2.7.1 Igloo G is not a disposal facility; therefore, a survey plat is not required.

3.0 FINANCIAL REQUIREMENTS: 40 CFR 270.14(b)(15), 264.142; R315-3-5(b)(15)

- 3.1 A closure cost estimate and financial assurance mechanism are not required for this facility since R315-8-8 exempts the Federal government from these requirements.